

Amount of substance, water, United States, NIST (National Institute of Standards and Technology)

Note: In the case where an uncertainty range is given, the expanded uncertainty range spans from the smallest numerical value of the uncertainty to the largest numerical value of the uncertainty found within the quantity range.

NMI Service Identifier	Measurement Service Sub-Category	Matrix	Measurand		Dissemination Range of Measurement Capability			Range of Expanded Uncertainties as Disseminated				Range of Certified Values in Reference Materials			Range of Expanded Uncertainties for Certified Value				Mechanism(s) for Measurement Service Delivery
			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	
8391200	Fresh water	acidic solution	aluminum	Mass fraction	10	1000	ng/g	0.3	30	ng/g	No	52.0	125.6	ng/g	1.5	3.4	ng/g	No	SRM 1640 SRM 1643d
8391201	Fresh water	acidic solution	antimony	Mass fraction	5	500	ng/g	0.15	15	ng/g	No	13.79	53.2	ng/g	0.42	1.1	ng/g	No	SRM 1640 SRM 1643d
8391202	Fresh water	acidic solution	arsenic	Mass fraction	10	100	ng/g	0.2	2	ng/g	No	26.67	55.1	ng/g	0.41	0.72	ng/g	No	SRM 1640 SRM 1643d
8391203	Fresh water	acidic solution	barium	Mass fraction	20	1000	ng/g	0.6	20	ng/g	No	148.0	499	ng/g	2.2	8.8	ng/g	No	SRM 1640 SRM 1643d
8391204	Fresh water	acidic solution	beryllium	Mass fraction	5	100	ng/g	0.15	1.5	ng/g	No	12.33	34.94	ng/g	0.28	0.41	ng/g	No	SRM 1640 SRM 1643d
8391205	Fresh water	acidic solution	boron	Mass fraction	20	1000	ng/g	0.6	20	ng/g	No	142.5	301.1	ng/g	5.1	6.1	ng/g	No	SRM 1640 SRM 1643d

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	
8391206	Fresh water	acidic solution	cadmium	Mass fraction	1	200	ng/g	0.05	10	ng/g	No	22.79	22.79	ng/g	0.96	0.96	ng/g	No	SRM 1640
8391207	Fresh water	acidic solution	chromium	Mass fraction	2	200	ng/g	0.02	6	ng/g	No	18.2	38.6	ng/g	0.20	1.6	ng/g	No	SRM 1640 SRM 1643d
8391208	Fresh water	acidic solution	cobalt	Mass fraction	5	500	ng/g	0.1	10	ng/g	No	24.61	24.61	ng/g	0.58	0.58	ng/g	No	SRM 1643d
8391209	Fresh water	acidic solution	iron	Mass fraction	5	500	ng/g	0.2	20	ng/g	No	34.3	89.8	ng/g	1.6	3.8	ng/g	No	SRM 1640 SRM 1643d
8391210	Fresh water	acidic solution	lead	Mass fraction	1	200	ng/g	0.02	4	ng/g	No	17.86	27.89	ng/g	0.14	0.63	ng/g	No	SRM 1640 SRM 1643d
8391211	Fresh water	acidic solution	manganese	Mass fraction	5	500	ng/g	0.1	10	ng/g	No	37.07	121.5	ng/g	0.82	1.1	ng/g	No	SRM 1640 SRM 1643d
8391212	Fresh water	acidic solution	mercury	Mass fraction	0.05	50	mg/kg	0.001	1	mg/kg	No	1.590	1.590	mg/kg	0.018	0.018	mg/kg	No	SRM 1641d
8391213	Fresh water	acidic solution	molybdenum	Mass fraction	5	1000	ng/g	0.005	10	ng/g	No	46.75	111.1	ng/g	0.26	1.7	ng/g	No	SRM 1640 SRM 1643d
8391214	Fresh water	acidic solution	nickel	Mass fraction	5	1000	ng/g	0.15	30	ng/g	No	57.2	57.2	ng/g	2.7	2.7	ng/g	No	SRM 1643d

Calibration and Measurement Capabilities

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	
8391215	Fresh water	acidic solution	selenium	Mass fraction	2	200	ng/g	0.04	4	ng/g	No	11.3	21.96	ng/g	0.17	0.51	ng/g	No	SRM 1640 SRM 1643d
8391216	Fresh water	acidic solution	silver	Mass fraction	1	500	ng/g	0.05	5	ng/g	No	1.25	7.62	ng/g	0.06	0.25	ng/g	No	SRM 1640 SRM 1643d
8391217	Fresh water	acidic solution	strontium	Mass fraction	2	1000	ng/g	0.001	10	ng/g	No	124.2	290.2	ng/g	0.7	3.4	ng/g	No	SRM 1640 SRM 1643d
8391218	Fresh water	acidic solution	thallium	Mass fraction	1	100	ng/g	0.03	3	ng/g	No	7.17	7.17	ng/g	0.25	0.25	ng/g	No	SRM 1643d
8391219	Fresh water	acidic solution	vanadium	Mass fraction	2	200	ng/g	0.04	4	ng/g	No	12.99	34.6	ng/g	0.37	1.4	ng/g	No	SRM 1640 SRM 1643d
8391220	Fresh water	acidic solution	zinc	Mass fraction	1	500	ng/g	0.01	10	ng/g	No	71.3	71.3	ng/g	0.60	0.60	ng/g	No	SRM 1643d

The expanded uncertainties correspond to $k = 2$ (level of confidence 95%)